



September 13, 2013

SLUDGEHAMMER GROUP LLC
KATHY BEER
336 S. DIVISION ROAD
PETOSKEY MI 49770

SLUDGEHAMMER GROUP LTD.
DR DANIEL WICKHAM
336 S DIVISION RD
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Re: Description: SEWAGE TREATMENT APPARATUS
Manufacturer: SLUDGEHAMMER GROUP LTD.
Product Name: SLUDGEHAMMER - AEROBIC BACTERIAL GENERATOR
Model Number(s): SLUDGEHAMMER S-86
[MAX. DWF 600 GPD]
Product File No: 20130260

The specifications and/or plans for this plumbing product have been reviewed and determined to be in compliance with chapters SPS 382 through 384, Wisconsin Administrative Code, and Chapters 145 and 160, Wisconsin Statutes.

The Department hereby issues an approval based on the Wisconsin Statutes and the Wisconsin Administrative Code. **This approval is valid until the end of September 2018.**

This approval supersedes the approval issued on 5/20/08 under product file number 20080197.

This approval letter shall be incorporated with your previously approved plans and/or specifications approved under product file number 20080197.

This approval is contingent upon compliance with the following stipulation(s):

- This product must be sized based on daily wastewater flow (gallons per day). The gallons per day value must be at least 150 gallons per day per bedroom.
- Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- The maximum daily estimated wastewater flow, which may discharge through this product, is 600 gallons per day.
- This product must be installed in sewage treatment or holding tanks which were approved at the time of existing installation and/or are currently approved for new/replacement installations by this department and meets the sizing requirements for this product use.
- The maximum daily wastewater (DWF) flow which may discharge through each S-86 unit is 600 gallons per day.
- The Sludgehammer model S-86 must be installed in a tank or tanks that comply with the following:
 1. Tank volume of the compartment or tank which will house the treatment device must be at least 800 and no greater than 1600 gallons.
 2. Liquid level of the compartment or tank which will house the treatment device must be at least 38 inches and no greater than 72 inches.

3. Distance that the treatment device must be horizontally away from the tank inlet or the outlet of the first or second compartment or tank must be at least 6 inches and no greater than 36 inches.
4. The volume of the compartment or tank that does not hold a single treatment device must be at least 300 gallons.
5. Liquid level of the compartment or tank that does not house the treatment device must be at least 38 inches and not greater than 72 inches.
6. Where multiple S-86 units are installed the compartment or tank which will house the multiple treatment units shall be at least 800 gallons per treatment device and not greater than 1600 gallons per device.
7. The volume of the compartment not containing multiple treatment devices must be at least 400 gallons per treatment device and not more than 800 gallons per device.

Table 1
Maintenance, Inspection, Pumping Requirements
PRODUCT/ (Models) SludgeHammer S-86

| | |
|---|--|
| Initial/Startup Inspection/ Maintenance | within 2 months of installation date |
| Ongoing Pumping Cycle And/Or Requirements | as needed or when sludge buildup in treatment chamber reaches 6 inches |
| Back-Wash Cycle | N/A |
| Effluent Performance Levels | NSF-40 Class I |
| BOD5 Credit For Downsizing Distribution Area | YES |
| Fecal Credit For Reduction Of Vertical Separation | YES |
| Additional Comments | Bacterial packet to be replaced once a year during required annual maintenance inspection by installer |

NOTE 1: The installation of a S-86 shall not delay any servicing, inspection or maintenance schedules as required by ch. SPS 383 or local ordinance.

NOTE 2: Nitrate removal claims have not been verified by DSPS, nor do they apply to any POWTS having a S-86 installed.

The department is in no way endorsing this product or any advertising, and is not responsible for any situation which may result from its use.

Sincerely,

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